

We claim:

1. A cleansing composition comprising

- a. a liquid silicone;
- b. a water dispersible component and
- c. an ester.

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2. The composition of claim 1 wherein the composition is comprised of, based upon the total weight of the composition,

- a. from about 10 percent to about 35 percent of the liquid silicone;
- b. from about 10 percent to about 35 percent of the water dispersible component;
- and
- c. from about 55 percent to about 65 percent of the ester.

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3. The cleansing composition of claim 1 wherein the silicone is selected from the group consisting of hexamethylsiloxane, dimethicone, dimethiconol, cyclomethicone, and mixtures thereof.

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4. The cleansing composition of claim 3 wherein the cyclomethicone is selected from the group consisting of cyclo tetradimethyl siloxane; cyclopentadimethyl siloxane, cyclohexadimethyl siloxane, cycloheptadimethyl siloxane, and mixtures thereof.

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5. The cleansing composition of claim 1 wherein the water dispersible component is selected from the group consisting of polyethylene glycol 400, hexylene glycol, propylene glycol, polypropylene glycol-10 methylglucose ether, ethoxydiglycol, polyethylene glycol-6 caprylic/capric glycerides, ethylene glycol monobutyl ether, triisopropyl citrate, polyethylene glycol-8 caprylic/capric glycerides, 3-methoxy-3-methyl-1-butanol, dimethyl isosorbide, polyethylene-6 caprylic/capric triglyceride, and mixtures thereof.

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6. The cleansing composition of claim 5 wherein the water dispersible component is selected from the group consisting of hexylene glycol, dimethyl isosorbide, polyethylene glycol-6 caprylic/capric glyceride, and mixtures thereof.

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7. The cleansing composition of claim 1 wherein the water dispersible component is comprised of, based upon the total weight percent of the cleaning composition,

- a) from about 5 percent to about 15 percent of hexylene glycol;
- b) from about 5 percent to about 10 percent of polyethylene-6 caprylic/capric triglyceride.

b) branched or straight-chained C<sub>5</sub> to C<sub>22</sub> alkyl acid esters of branched or unsaturated C<sub>5</sub> to C<sub>22</sub> alkyl alcohols; and

c) straight-chained or branched C<sub>5</sub> to C<sub>22</sub> alkyl acid esters of optionally ethoxylated/propoxylated polyols.

5 23. The cleansing composition of claim 9 wherein the ester is a mixture of, based upon the total weight percent of the esters,:

a) from about 30 percent to about 80 percent of branched or straight-chained C<sub>5</sub> to C<sub>22</sub> alkyl acid esters of branched or unsaturated C<sub>5</sub> to C<sub>22</sub> alkyl alcohols;

b) from about 10 percent to about 50 percent of branched C<sub>5</sub> to C<sub>22</sub> alkyl alcohol esters of an aromatic acid; and

c) from about 10 percent to about 50 percent of straight-chained or branched C<sub>5</sub> to C<sub>22</sub> alkyl acid esters of optionally ethoxylated/propoxylated polyols.

24. The cleansing composition of claim 9 wherein the ester is a mixture comprised of, based upon the total weight percent of the ester,:

15 a) from about 15 percent to about 50 percent isononyl isononanoate;

b) from about 15 percent to about 50 percent isostearyl palmitate;

c) from about 15 percent to about 50 percent cetyl octanoate; and

d) from about 15 percent to about 50 percent pentaerthritol tetraoctanoate.

20 23 25. A cleaning system comprising:

a. the cleansing system of claim 1;

b. water; and

c. a polymeric emulsifier and/or a thickener.

24 26. The cleansing system of claim 25 comprising, based upon the total weight of the cleansing system:

25 a. at least 5 percent of the cleansing system of claim 1;

b. from about 70 percent to about 98 percent of water; and

c. from about 0.5 to about 1.5 percent of a polymeric emulsifier and/or thickener.

- 25 27. The cleansing system of claim 25 wherein the polymeric emulsifier is polyethylene glycol-30 dipolyhydroxystearate; dimethicone/copolyol; substituted acrylates; and mixtures thereof.
28. The cleansing system of claim 25 wherein the thickener is selected from the group consisting of carbomers, acrylate copolymers, hydroxyethylcellulose modified with cetyl ether groups, polyvinylmethyl ether/maleic anhydride (PVM/MA) decadiene crosspolymer, and mixtures thereof.
29. The cleansing system of claim 25 wherein the thickener is selected from the group consisting of acrylates/aminoacrylates copolymer, acrylates/steareth-20 methacrylate copolymer; acrylates/ceteth-20 itaconate copolymer, acrylates/steareth-20 itaconate copolymer, carbomers, modified hydroxycellulose, polyvinylacetate/maleic anhydride (PVA/MA) decadiene crosspolymer, and mixtures thereof.
30. The cleansing system of claim 25 further comprising, based upon the total weight of the cleansing system, from about 1 percent to about 3 percent of a cleansing enhancer.
31. The cleansing system of claim 30 wherein the cleansing enhancer is a nonfoaming surfactant and/or a non-ionic emulsifier.
32. The cleansing system of claim 31 wherein the nonfoaming surfactant is selected from the group consisting of sucrose cocoate, sucrose stearate and mixtures thereof.
33. The cleansing system of claim 31 wherein the non-ionic emulsifier is selected from the group consisting of isoceteth 20, oleth-2, mixture of PEG-40 hydrogenated castor oil and trideceth-9, Poloxamer 184, laureth-4, sorbitan trioleate, polyoxyethylene-(2) oleyl ether, sorbitan stearate, cetearyl glucoside, glyceryl oleate, and mixtures thereof.
34. The system of claim 25 further comprising a benefit agent.
35. The system of claim 34 wherein the benefit agent is selected from the group consisting of vasoconstrictors, collagen enhancers, anti-edema agents, depigmentation agents; reflectants; detangling/wet combing agents; film forming polymers; humectants; amino acid agents; antimicrobial agents; allergy inhibitors; anti-acne agents; anti-aging agents; anti-wrinkling agents, antiseptics; analgesics; antitussives; antipruritics; local anesthetics; anti-hair loss agents; hair growth promoting agents; hair growth inhibitor agents; antihistamines; antiinfectives; inflammation inhibitors; anti-emetics; anticholinergics; vasoconstrictors; vasodilators; wound healing promoters; peptides, polypeptides and proteins; deodorants and anti-perspirants; medicament agents; skin emollients and skin moisturizers; skin firming agents, hair conditioners; hair softeners; hair moisturizers;

vitamins; tanning agents; skin lightening agents; antifungals; depilating agents; shaving preparations; external analgesics; perfumes; counterirritants; hemorrhoidals; insecticides; poison ivy products; poison oak products; burn products; anti-diaper rash agents; prickly heat agents; make-up preparations; vitamins; amino acids and their derivatives; herbal

5 extracts; retinoids; flavenoids; sensates; anti-oxidants; skin conditioners; hair lighteners; chelating agents; cell turnover enhancers; coloring agents; pigments; sunscreens and mixtures thereof.

- 34 36. The system of claim 34 wherein the benefit agent is selected from the group consisting of feverfew, centella asiatica, olive leaf, wheat protein, oat oil, lycopene, DMAE, soy and derivatives thereof, colloidal oatmeal, sulfonated shale oil, elubiol, 6-(1-piperidiny)-2,4-pyrimidinediamine-3-oxide, finasteride, ketoconazole, salicylic acid, zinc pyrithione, coal tar, benzoyl peroxide, selenium sulfide, hydrocortisone, sulfur, menthol, pramoxine hydrochloride, tricetyl ammonium chloride, polyquaternium 10, panthenol, panthenol triacetate, vitamin A and derivatives thereof, vitamin B and derivatives thereof, vitamin C and
- 10 derivatives thereof, vitamin D and derivatives thereof, vitamin E and derivatives thereof, vitamin K and derivatives thereof, keratin, lysine, arginine, hydrolyzed wheat proteins, hydrolyzed silk proteins, octyl methoxycinnamate, oxybenzone, minoxidil, titanium dioxide, zinc dioxide, retinol, erythromycin, tretinoin, and mixtures thereof.
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37. The system of claim 33 wherein the benefit agent is present in an amount, based upon the total weight of the system, from about 0.001 percent to about 20.0 percent.

38. The system of claim 35 further comprised of, based upon the total weight of the system, from about 5 percent to about 15 percent of a foaming surfactant.

39. A method of treating hair loss comprising topically applying the system of claim 35 with an effective amount of a hair loss treatment agent to a desired location on an animal or human.

40. The method of claim 39 wherein the hair loss treatment agent is selected from the group consisting of minoxidil, 6-(1-piperidiny)-2,4-pyrimidinediamine-3-oxide, N'-cyano-N-(tert-pentyl)-N'-3-pyridinyl-guanidine, finasteride, retinoids and derivatives thereof, ketoconazole, elubiol or mixtures thereof.

41. A method for inhibiting hair growth comprising topically applying the system of claim 35 with a hair growth inhibiting agent to a desired area on an animal or human for inhibiting hair growth.

42. The method of claim 41 wherein the benefit agent is selected from the group consisting of serine proteases, retinol, isotretinoin, betamethoisone, alpha-tocophenol and derivatives thereof, and mixtures thereof.

41/ 43. A method for treating acne comprising topically applying a mixture of the system of claim 25 and an effective amount of an anti-acne agent to the skin of an animal or human at a desired area.

42/ 44. The method of claim 43 wherein the anti-acne agent is selected from the group consisting of benzoyl peroxide, retinol, elubiol, antibiotics, salicylic acid, and mixtures thereof.

43/ 45. A method for reducing the signs of aging and other manifestations of photodamage comprising topically applying a mixture of the system of claim 25 and an effective amount of an anti-aging agent to the skin of an animal or human at a desired area.

44/ 46. The method of claim 45 wherein the anti-aging agent is selected from the group consisting of retinoids, anti-oxidants, alpha-hydroxy acids, beta-hydroxy acids and mixtures thereof.

45/ 47. A method for depigmenting the skin comprising topically applying the system of claim 25 and an effective amount of a depigmentation benefit agent to the skin of an animal or human at a desired area.

46/ 48. The method of claim 47 wherein the depigmentation agent is selected from the group consisting of retinol, Kojic acid, hydroquinone, and mixtures thereof.

47/ 49. A method for treating the symptoms and/or the diseases of dandruff, seborrheic dermatitis and/or psoriasis, comprising topically applying a mixture of the system of claim 25 and an effective amount of a benefit agent capable of treating the symptoms to the skin of an animal or human at a desired area.

48/ 50. The method of claim 49 wherein the benefit agent is selected from the group consisting of shale oil and derivatives thereof, elubiol, ketoconazole, coal tar, salicylic acid, zinc pyrithione, selenium sulfide, hydrocortisone, sulfur, menthol, pramoxine hydrochloride, and mixtures thereof.

51. The use of the composition of claim 25 in a personal care product.

52. The composition of claim 51, wherein the personal care product is in the form of a gel, a bath, a wash, a mousse, a shampoo, a rinse, a lotion, a cream, a wipe, a brush, a sponge, or a spray.

53. The use of the composition of claim 25 as a make-up remover.

54. The composition of claim 25 in the form of an oil-in-water emulsion.

55. A method of cleansing hair, skin or nails comprised of applying the composition of claim 1 to a desired location.

56. A method of cleansing hair, skin, or nails comprised of applying the system of claim 25 to a desired location.

57. The cleansing composition of claim 25 wherein the water dispersible component is comprised of, based upon the total weight percent of the cleaning system,

8. The cleansing composition of claim 1 wherein the ester is selected from liquid esters that either possess a structural means for ensuring the liquidity of the ester or are heterogeneous in nature

5 9. The cleansing composition of claim 1 wherein the ester is selected from the group consisting of

- a) a branched C<sub>5</sub> to C<sub>22</sub> alkyl alcohol ester of an aromatic acid;
- b) a straight-chained or branched C<sub>5</sub> to C<sub>22</sub> alkyl acid esters of optionally ethoxylated/propoxylated polyols having from about 3 carbon atoms to about 7 carbon atoms;
- 10 c) branched C<sub>5</sub> to C<sub>22</sub> alkyl alcohol esters of branched polyacids;
- d) branched or straight-chained C<sub>5</sub> to C<sub>22</sub> alkyl acid esters of branched and/or unsaturated C<sub>5</sub> to C<sub>22</sub> alkyl alcohols;
- e) branched or unsaturated C<sub>5</sub> to C<sub>22</sub> alkyl alcohol esters of an acid selected from the group consisting of adipic acid, succinic acid, sebacic acid, maleic acid, and mixtures thereof
- 15 f) polyether interrupted fatty acid esters;
- g) benzoic acid ester of heterogeneous alcohols having from about 8 carbon atoms to about 22 carbon atoms; and
- h) mixtures thereof,

20 10. The cleansing composition of claim 9 wherein the ester is selected from the group consisting of straight-chained or branched C<sub>5</sub> to C<sub>22</sub> alkyl acid esters of optionally ethoxylated/propoxylated polyols; benzoic acid esters of heterogeneous alcohols; and mixtures thereof.

25 11. The cleansing composition of claim 9 wherein the ester is selected from the group consisting of butyloctyl salicylate; hexyldecyl benzoate; and butyloctyl benzoate; alkyl benzoates having from about 12 carbon atoms to about 15 carbon atoms; and mixtures thereof.

12. The cleansing composition of claim 11 wherein the ester is selected from the group consisting of hexyldecyl benzoate, butyloctyl benzoate, and mixtures thereof.

30 13. The cleansing composition of claim 9 wherein the ester is selected from the group consisting of pentaerythritol tetraoctanoate; trimethylolpropane trioctanoate;

trioctanoin; pentaerythrityl tetrapelargonate; sorbitan trioleate; caprylic/capric triglyceride; neopentyl alcohol tetraoctanoate, and mixtures thereof.

14. The cleansing composition of claim 13 wherein the ester is selected from the group consisting of caprylic/capric triglyceride; pentaerythrityl tetraoctanoate;  
5 trimethylolpropane trioctanoate; pentaerythrityl tetrapelargonate; and mixtures thereof.

15. The cleansing composition of claim 9 wherein the ester is selected from the group consisting of branched alkyl alcohol esters of branched polyacids, wherein the alkyl alcohol is optionally substituted and contains from about 3 carbon atoms to about 22 carbon atoms.

- 10 16. The cleansing composition of claim 15 wherein the ester is trioctyldecyl citrate and mixtures thereof.

17. The cleansing composition of claim 9 wherein the ester is selected from the group consisting of tridecyl neopentanoate, isostearyl palmitate, cetyl ricinoleate, cetyl octanoate, isononyl isononanoate, butyl stearate, octyldecyl soyate, tridecyl erucate, octyldecyl erucate/eicosil erucate, and mixtures thereof.

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18. The cleansing composition of claim 17 wherein the ester is selected from the group consisting of cetyl octanoate, isostearyl palmitate, isononyl isononanoate, and mixtures thereof.

- 20 19. The cleansing composition of claim 9 wherein the ester is selected from the group consisting of diisopropyl adipate, dioctyl sebacate, dioctyl succinate, dioctyl maleate, diisostearyl adipate, diethyl sebacate, and mixtures thereof.

20. The cleansing composition of claim 19 wherein the ester is selected from the group consisting of diethyl sebacate, dioctyl sebacate, diisostearyl adipate, and mixtures thereof.

- 25 21. The cleansing composition of claim 9 wherein the ester is selected from the group consisting of laureth-2 benzoate; C<sub>8</sub> to C<sub>22</sub> fatty alkyl (optionally polypropylenoxy) polyethyleneoxy carboxylate esters derived from an alcohol having from about 1 carbon atom to about 22 carbon atoms; and mixtures thereof.

- 30 22. The cleansing composition of claim 21 wherein the ester is isopropyl propylene glycol-2-isodeceth-7 carboxylate.

23. The cleansing composition of claim 9 wherein the ester is selected from at least two of the following esters:

- Two 23's*  
a) branched C<sub>5</sub> to C<sub>22</sub> alkyl alcohol esters of an aromatic acid;

a) from about 0.1 percent to about 5 percent of hexylene glycol;

b) from about 0.5 percent to about 3.0 percent of polyoxyethylene-6 caprylic/capric triglyceride.

58. A cleaning composition comprised of

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a) a cyclomethicone liquid silicone;

b) a water dispersible component selected from the group consisting of hexylene glycol, PEG-6 caprylic/capric triglycerides, and mixtures thereof; and

c) an ester selected from the group consisting of isononyl isononanoate, isostearyl palmitate, cetyl octanoate, pentaerthritol tetraoctanoate, and mixtures thereof.

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59. A cleaning system comprised of

a) a cyclomethicone liquid silicone;

b) a water dispersible component selected from the group consisting of hexylene glycol, PEG-6 caprylic/capric triglycerides, and mixtures thereof;

15 c) an ester selected from the group consisting of isononyl isononanoate, isostearyl palmitate, cetyl octanoate, pentaerthritol tetraoctanoate, and mixtures thereof;

d) water; and

e) a PEG-30 dipolyhydroxystearate polymeric emulsifier and/or a carbomer thickener.

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a<sup>1</sup>  
add  
a<sup>2</sup>



are also employed in hair cosmetics for the purpose of protecting the hair or providing the hair with body.

5 It would be desirable to have a stable, economically-feasible composition that could not only effectively remove the residue from sebum as well as the residue from make-up and hair-protecting agents, but also impart a pleasant, non-oily "after-feel" to the skin and hair. It would also be desirable to create such a composition having a low degree of ocular and skin irritation. It would further be desirable to create such a composition that is capable of depositing various active agents into and onto the skin.

#### SUMMARY OF THE INVENTION

10 In accordance with this invention, there is provided a cleaning composition comprising:

- a. a liquid silicone;
- b. a water dispersible component; and
- c. an ester.

Another embodiment of this invention is directed to a cleaning system comprising:

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- a. a liquid silicone;
  - b. a water dispersible component;
  - c. an ester;
  - d. water; and
  - e. a polymeric emulsifier and/or thickener.

20 Another embodiment of this invention is directed to a foaming composition comprising:

- a. a water dispersible component;
- b. an ester;
- c. water; and a
- 25 d. foaming surfactant.

Yet another embodiment of the present invention is directed to a method for making an oil-in water emulsion comprised of:

30 neutralizing a hydrophilic thickening agent in a hydrophilic phase comprised of a polymeric emulsifier with an effective amount of a neutralizer under conditions sufficient after a lipophilic phase was combined with the hydrophilic phase.

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Yet another embodiment of the present invention is directed to a method for making a water-in-oil emulsion comprised of:

- 5        neutralizing a hydrophilic thickening agent in a hydrophilic phase comprised of a polymeric emulsifier with an effective amount of a neutralizer under conditions sufficient before combining a lipophilic phase with the hydrophilic phase.

Yet another embodiment of the present invention is directed to a method for depositing benefit agents into and onto the skin comprised of:

- 10        topically applying an effective amount of the benefit agent with a composition comprised of an optional liquid silicone, a water dispersible component, and an ester to a desired location.

Yet another embodiment of the present invention is directed to a method for depositing a benefit agent into and/or onto the skin, hair and/or nails comprising applying a composition comprising:

- 15        a. an optional liquid silicone;  
      b. a water dispersible component;  
      c. an ester;  
      d. a polymeric emulsifier and/or thickener; and  
      e. an effective amount of a benefit agent

to a desired location on a human or animal.

- 20        Yet another embodiment of the present invention is directed to a method for depositing a benefit agent into and/or onto the skin, hair and/or nails comprising applying a composition comprising:

- 25        a. an optional liquid silicone;  
      b. a water dispersible component  
      c. an ester;  
      d. water;  
      e. a foaming surfactant; and  
      f. an effective amount of a benefit agent

to a desired location on a human or animal.

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